Printer Driver Instruction Manual

~For Windows 7~

DS40/DS80

March 18, 2010 Ver.3.10

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●Notes for Safety Purposes

Please read the Instruction Manual well before using the printer, and follow all instructions carefully.
Further, the contents of the safety warnings and comments in the Instruction Manual concerning use met safety standards at the time of publishing.

●Concerning modification

The DS40/DS80 printer and the DS40/DS80 Printer Driver and CD contents were planned, developed, and manufactured by Dai Nippon Printing Co.,Ltd.
For safety purposes, any modification is prohibited.

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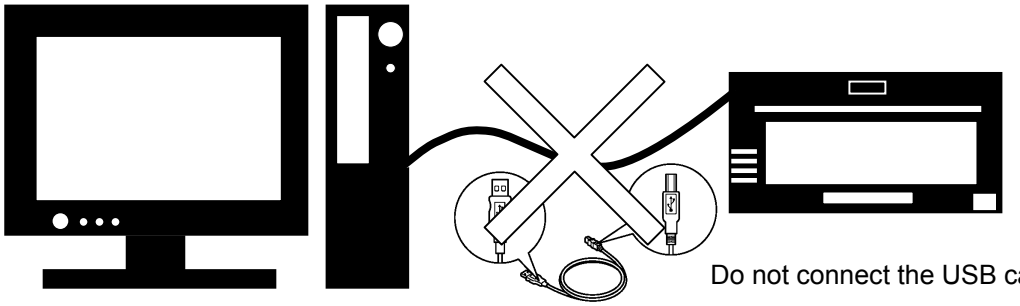
Chapter 1 Install

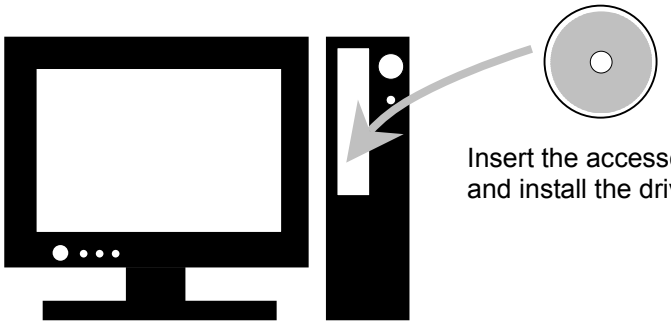
Installation Flow
Installation is done in the following 3 steps.
Details of each step are shown in a subsequent page.

STEP 1 Prepare the printer and computer → "1.1 Printer and Host computer Preparation"



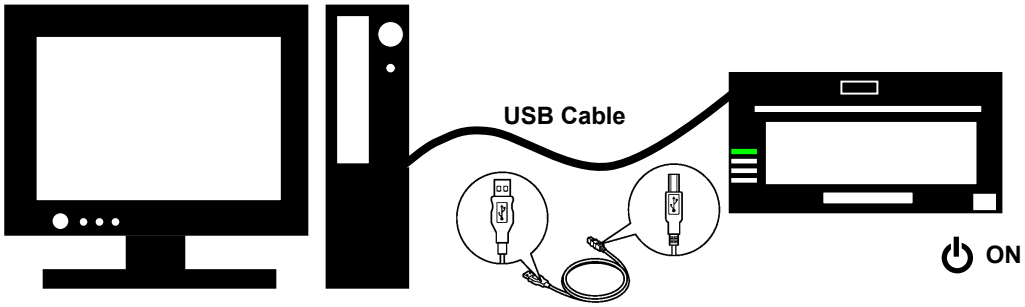
Do not connect the USB cable at this step.

STEP 2 Install the driver package → "1.2 Installing the Driver Package"



Insert the accessory CD into the disk drive
and install the driver package.

STEP 3 Install the printer driver → "1.3 Installing the Printer Driver"



Connect the USB cable, turn the printer power ON,
and install the printer driver.
After installation is complete, reboot the computer.

1.1 Printer and Host computer Preparation

Check that the power for the DS40/DS80 printer is OFF.
Have a USB cable ready. But do not connect the printer to the computer with the USB cable at this point.

In order to install the driver, login with administrator right. The following explanations are given on the assumption of use with administrator rights.

The following describes the driver installation for the “DS40”, but it is the same for the “DS80”. Please just substitute “DS80” for “DS40” when following the directions.

1.2 Installing the Driver Package

Insert the accessory CD into the disk drive.
Start Explorer, and click on the corresponding drive. (If the AutoPlay function is on, select “Open folder to view files – using Windows Explorer”.)
Select the following folders from the accessory CD.

DS40 = Drive of CD:\DS_Driver\DS40\English\7
DS80 = Drive of CD:\DS_Driver\DS80\English\7

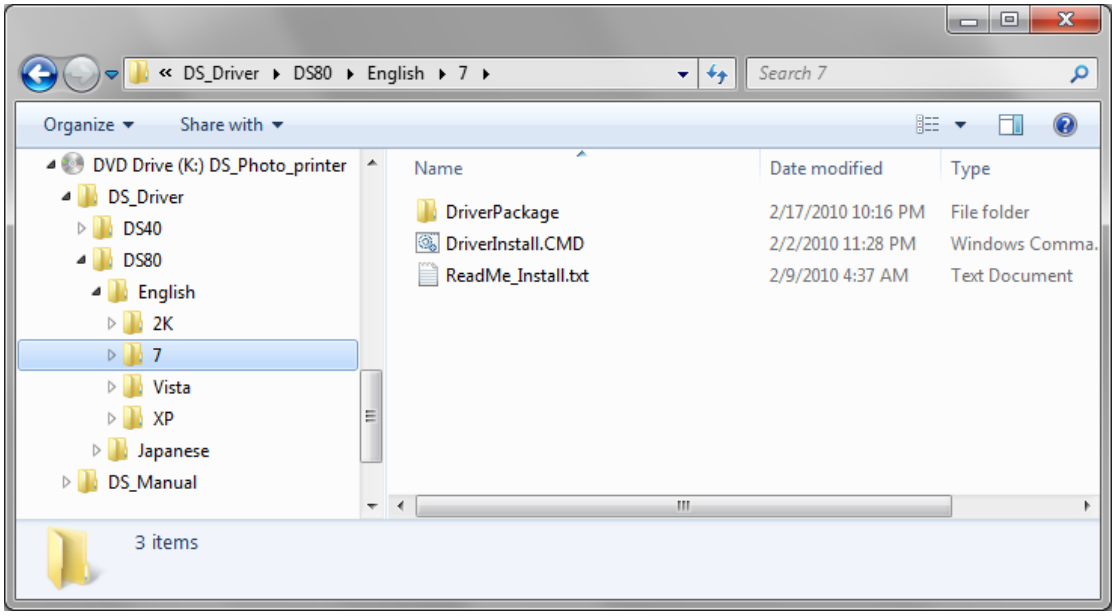


Fig 1.1 Driver Package Folder

In the selected folder, double click on the file “DriverInstall.CMD”. (Depending on your operating environment, the .CMD extension may not be shown.)
The best Driver Package Installer for your operating system (32 or 64 bit) will automatically be selected.

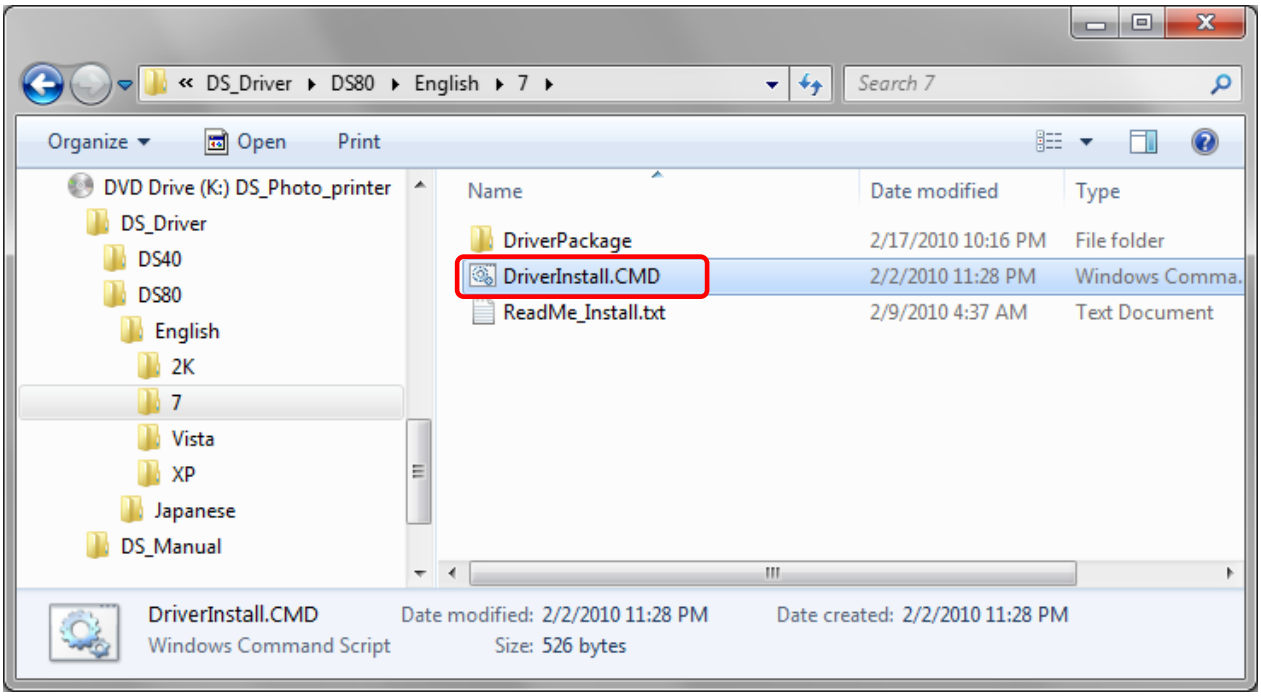


Fig 1.2 Install File

If the User Account Control dialog appears, click on “Yes”.

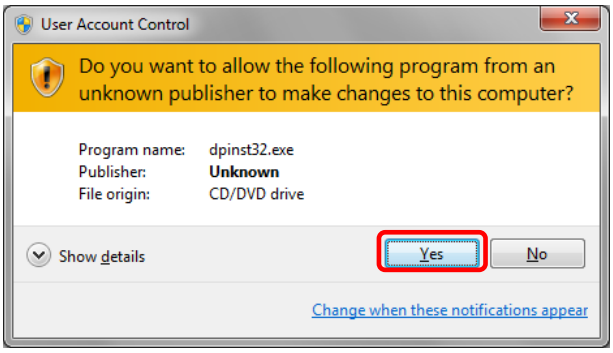


Fig 1.3 User Account Control

When the “Welcome to the Device Driver Installation Wizard!” window appears, click on “Next>”.

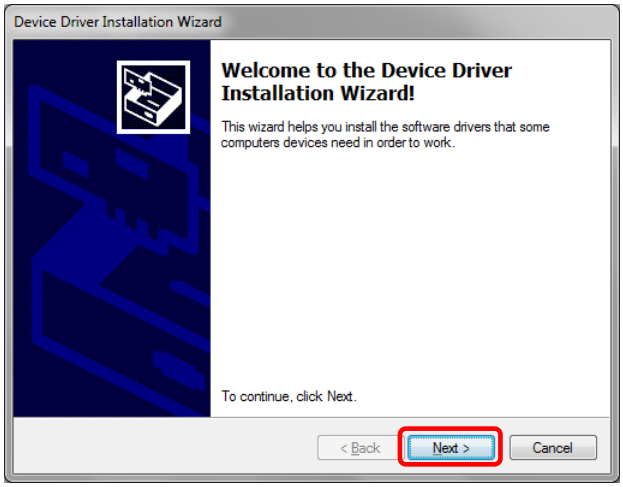


Fig 1.4 Starting of Installation Wizard

If the Windows Security confirmation window appears, click on “Install this driver software anyway”.

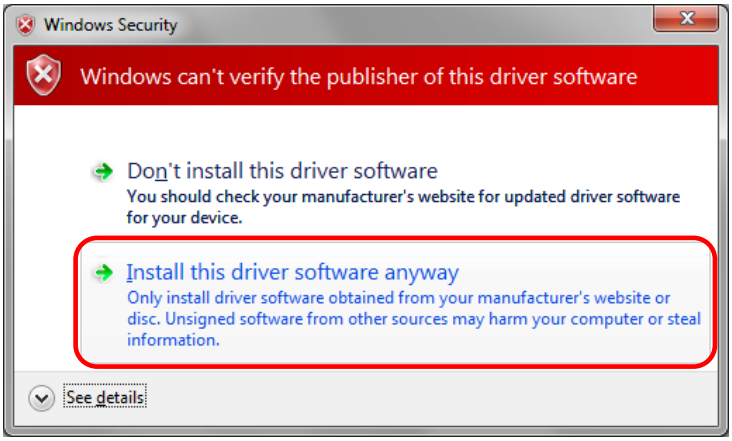


Fig 1.5 Windows Security confirmation

This starts the Driver Package installation. Please wait until it is complete.
When the “Completing the Device Driver Installation Wizard” window appears, click on “Finish”.

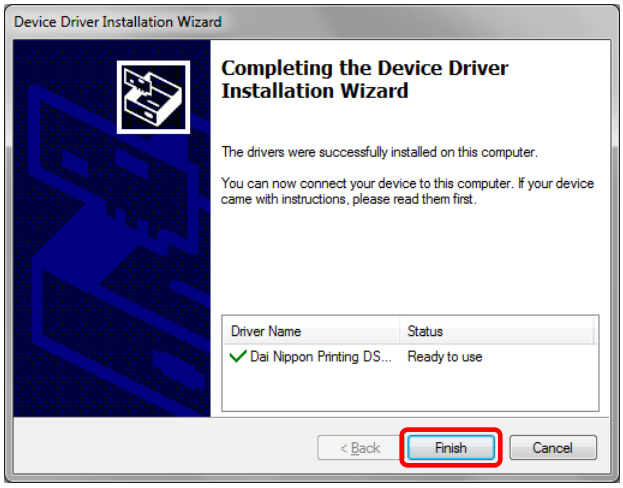


Fig 1.6 Completion of the Installation Wizard

1.3 Installing the Printer Driver

Connect the printer to the computer with the USB cable, and turn the printer power ON.
The printer will be recognized, and the driver installation should begin.
* Please refer to the manual for the DS40/DS80 printer for connection if needed.

When driver installation begins, the message “Installing device driver software” will appear above the task bar.

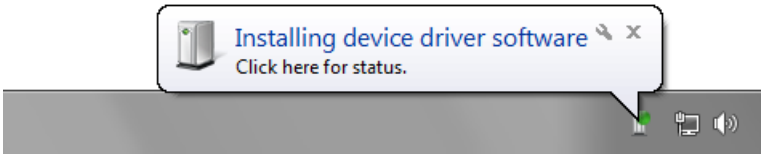


Fig 1.7 Driver Installation message

By clicking on this message, the “Driver Software Installation” window will be opened, and the driver installation status will be shown. Click on “Close” to close the window.

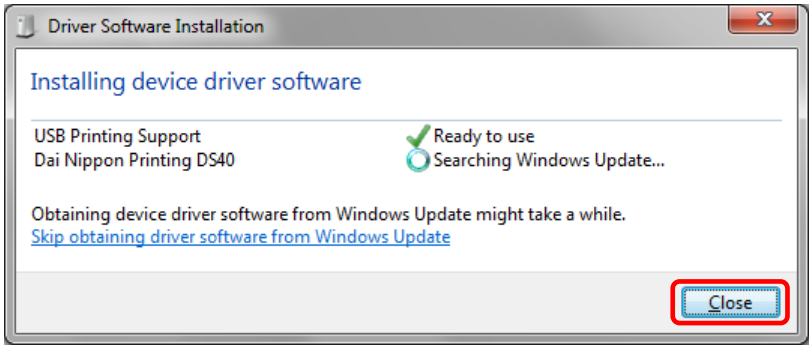


Fig 1.8 Driver Software Installation

* About “Skip obtaining driver software from Windows Update”
If the operating system setting is such that it will get the driver software from Windows Update, it will first search for the driver through Windows Update, so it will take more time to complete the installation. If you skip getting the driver software through Windows Update, the time to complete the installation will be decreased (Depending on the environment, it may take some time to complete the installation).
Click on “Skip obtaining driver software from Windows Update” in the “Driver Software Installation” window.

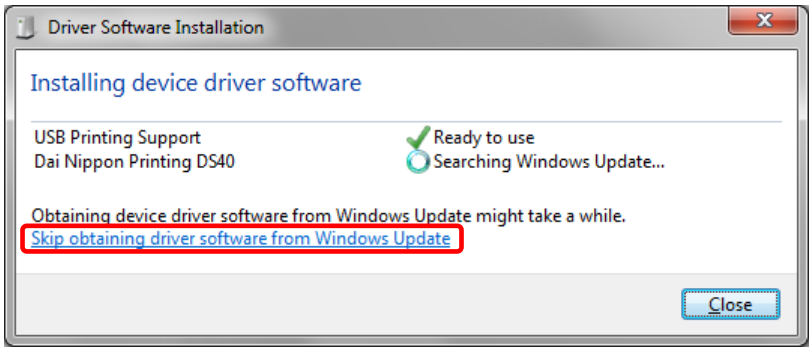


Fig 1.9 Skip obtaining driver software from Window Update

When the confirmation window appears, click on “Yes”.

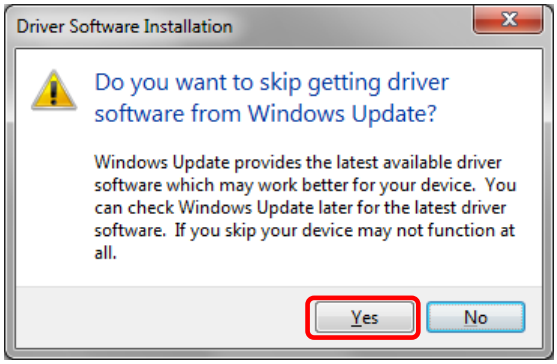


Fig 1.10 Skip getting the driver software from Windows Update

From a beginning of installation after a while, the message “Your device is ready to use” will appear above the task bar, and the printer driver installation will be complete.

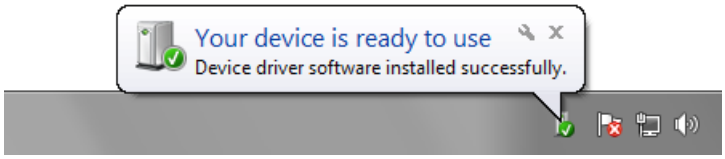


Fig 1.11 Driver Installation Complete message

By clicking on this message, the “Driver Software Installation” window will be opened, and “Your device is ready to use” will be shown. Click on “Close” to close the window.
(If the “Driver Software Installation” window is shown from the start of installation, the message above will not be shown.)

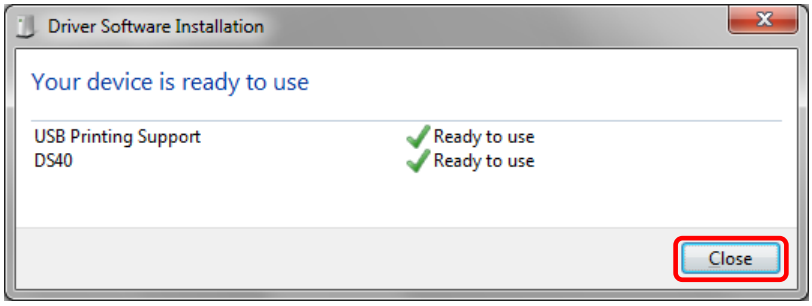


Fig 1.12 Driver Software installation complete

Select “Start”, then “Control Panel”, and open the control panel. Click on “View devices and printers” in the control panel.

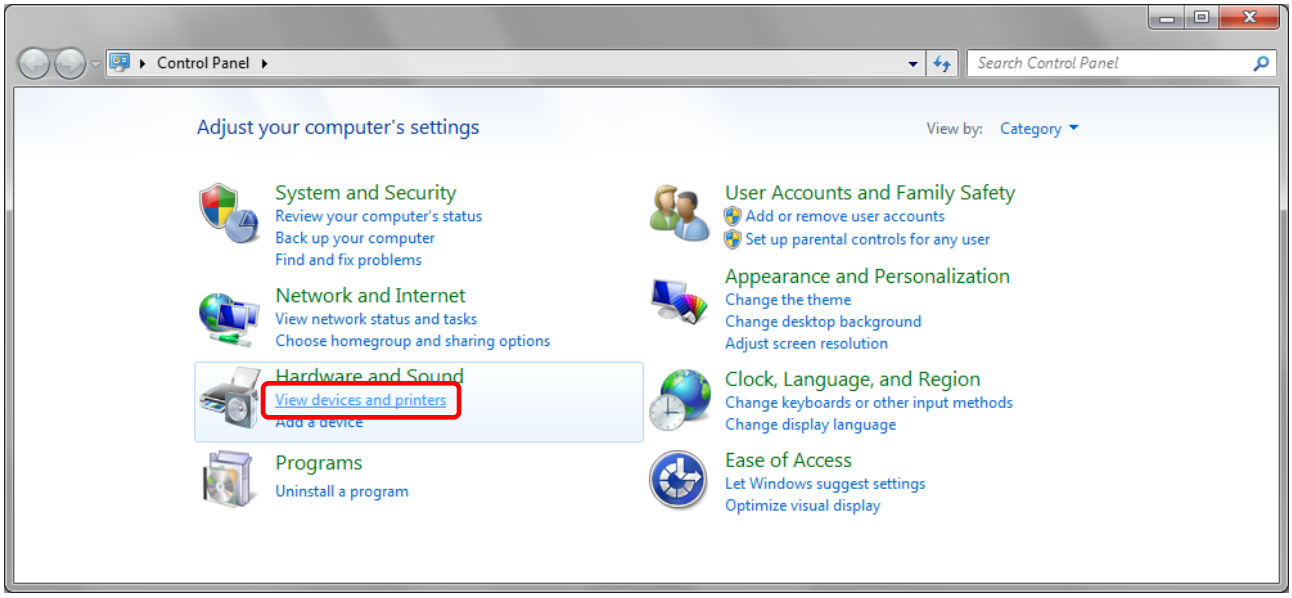


Fig 1.13 Control Panel

Check that the DS40 is shown in the Devices and Printers window.
Now, installation of the DS40 printer driver is complete.

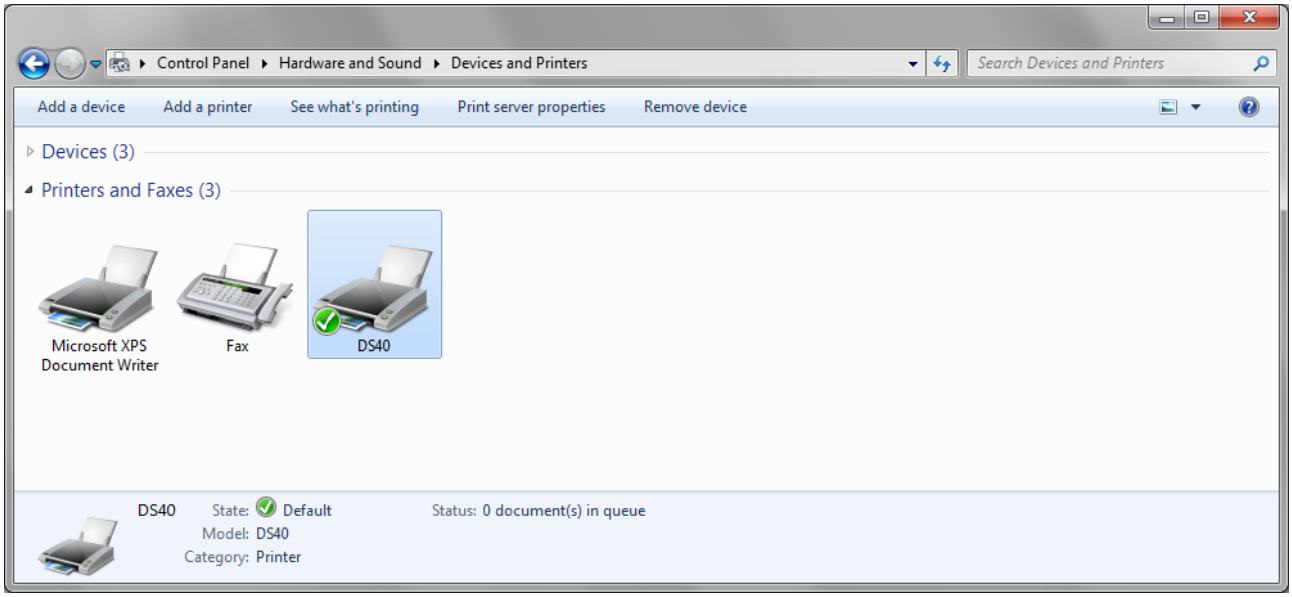


Fig 1.14 Devices and Printers window

After installation of the printer-driver is complete, be sure to reboot the computer.

If the DS40 printer driver installation was unsuccessful, the message “Device driver software was not successfully installed” will appear above the task bar.

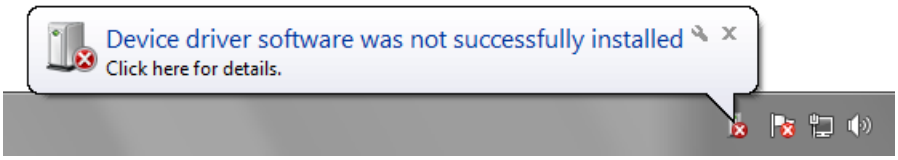


Fig 1.15 Driver Not Installed message

By clicking on this message, the “Driver Software Installation” window will be opened, and the message “Device driver software was not successfully installed” will appear. Click on the “Close” button.
(If the “Driver Software Installation” window is shown from the start of installation, the message above will not be shown.)
If the driver insallation was unsuccessful, refer to the next section “1.4 Installing a Driver for an Unspecified Device” and install the printer driver.

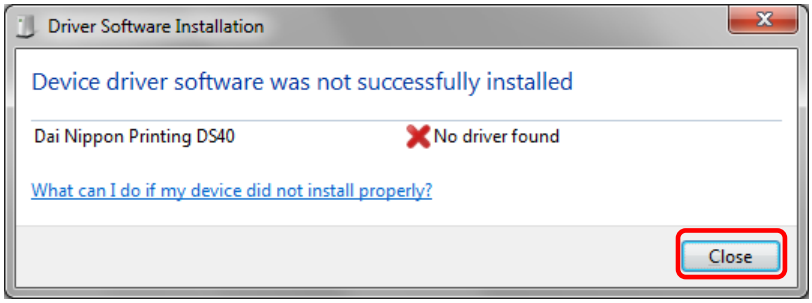


Fig 1.16 If the Driver is not installed successfully

1.4 Installing a Driver for an Unspecified Device

Before installing the driver package, connect the printer (with power ON) to the computer, to create an ”Unspecified” device in the “Devices and Printers” window. Using this method, the printer driver can be installed as follows.
Also, when a driver is not installed correctly but the "Unspecified" device is created by the method of connecting a printer after installing the driver package of usual printer driver installation procedure, you can install the driver using the following method.

1. Installing the Driver Package
If the driver package has not been installed yet, follow the procedure shown in “1.2 Installing the Driver Package”.
When the driver package has been installed, installation of the printer driver for the Unspecified device may be completed automatically.

2. Installing a driver for an Unspecified device
In the "Unspecified" device of the "Devices and Printers" window, do the right click of the "Photo Printer", and click on the "Troubleshoot" from pull-down menu.

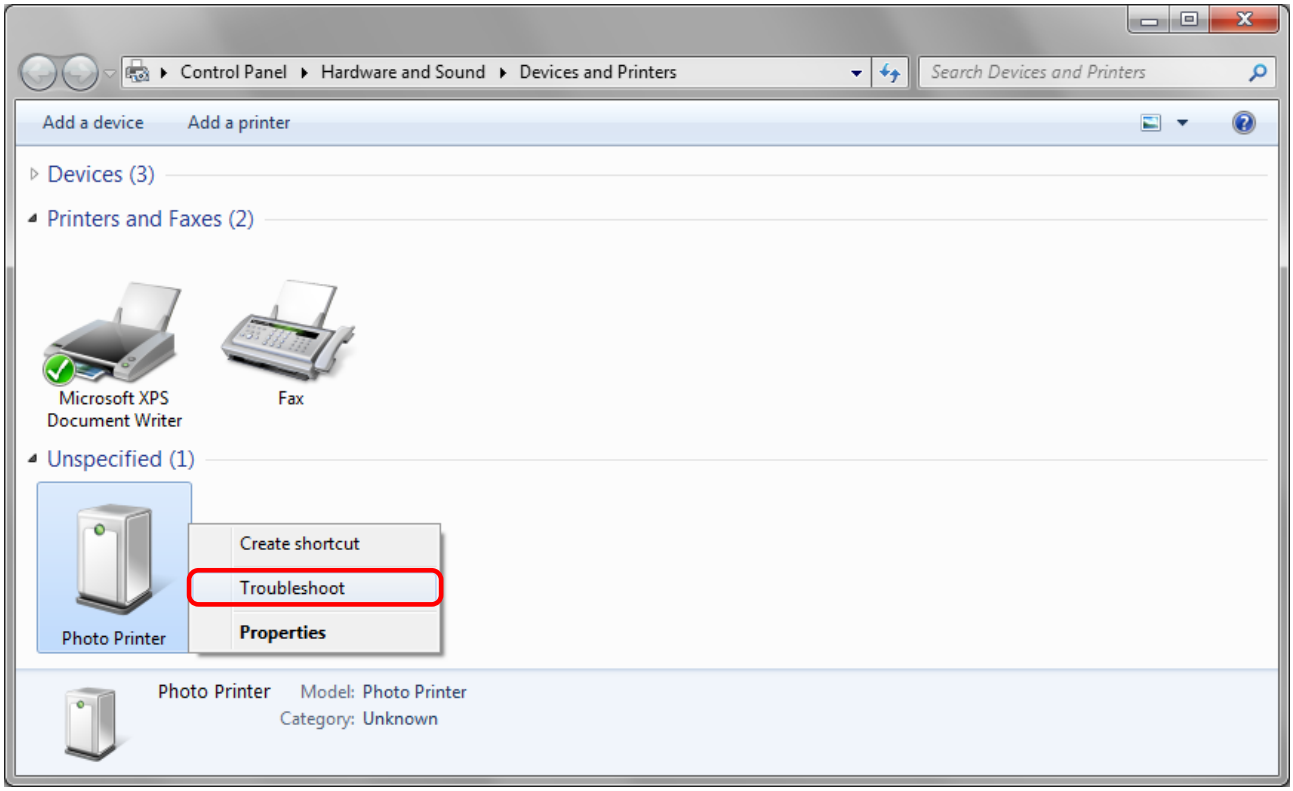


Fig 1.17 Photo Printer as an unspecified device

When the “Install a driver for this device” window appears, click on “Apply this fix”.
It will automatically search for the driver and installation is started.

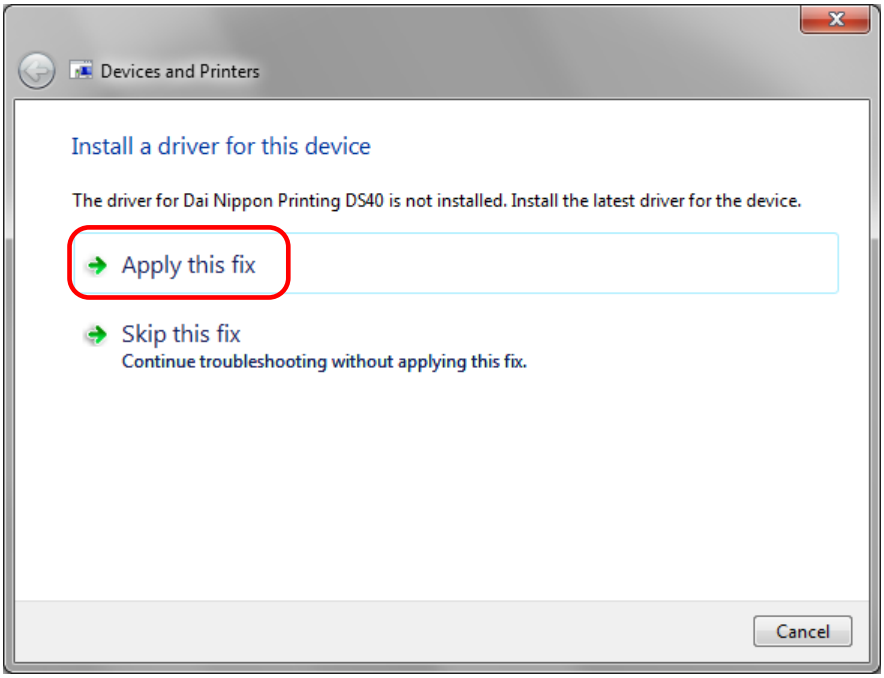


Fig 1.18 Applying the Fix

When the driver has been installed, “Troubleshooting has completed” will appear. Click on “Close the troubleshooter” to end the troubleshooting.

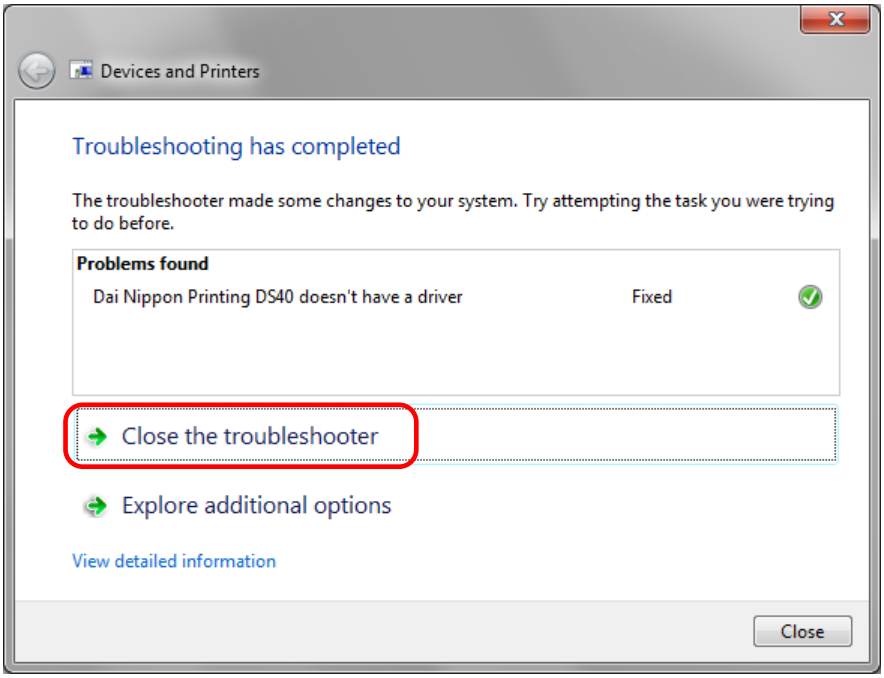


Fig 1.19 Completion of Troubleshooting

Check that the DS40 is displayed in the “Devices and Printers” window.
Now, the DS40 Printer Driver installation is complete.

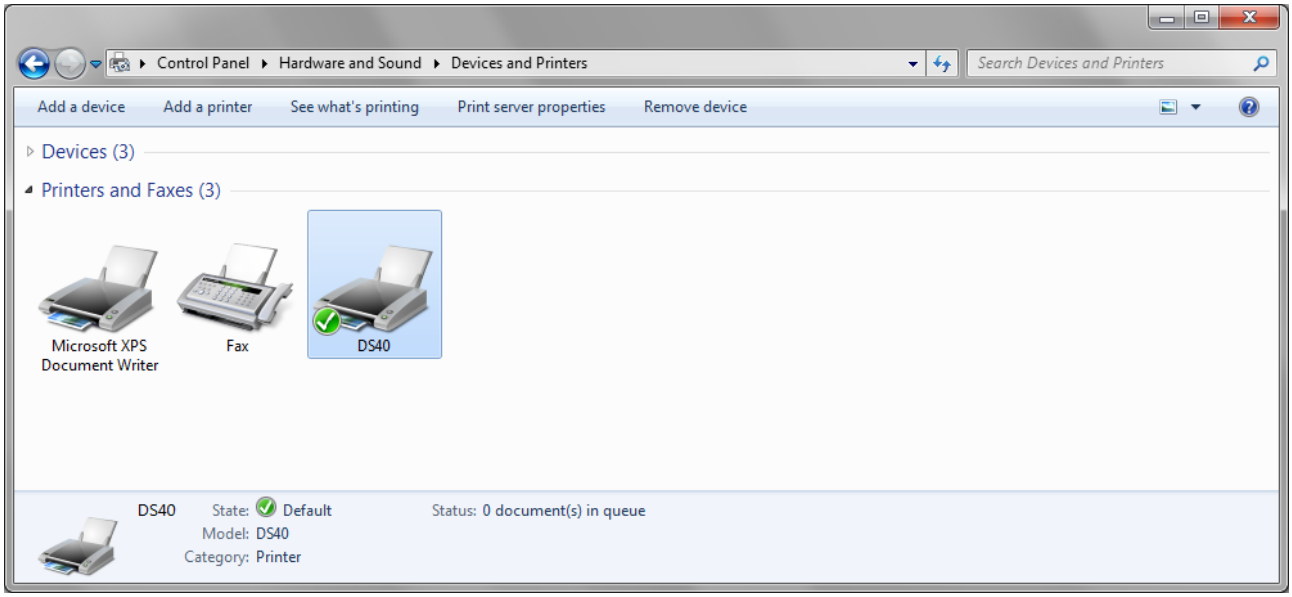


Fig 1.20 Devices and Printers

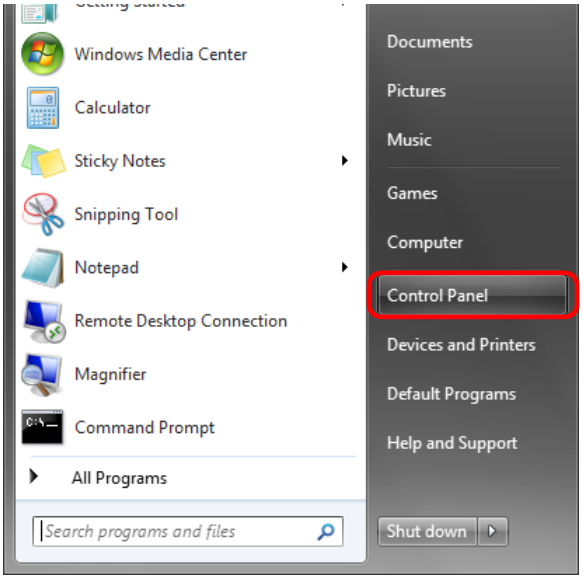
After installation of the printer-driver is complete, be sure to reboot the computer.

Chapter 2 Properties

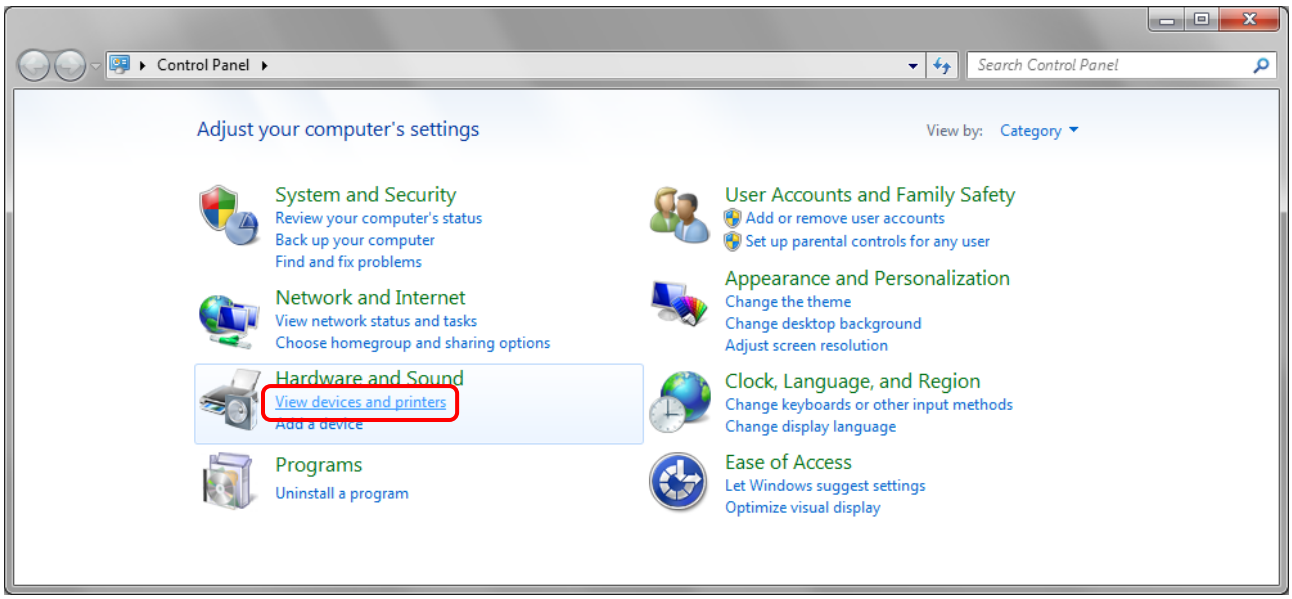
Various printer settings can be made using the DS40/DS80 Driver properties. As a rule, the printer settings should not be altered. Use the default settings present at installation. Alter paper-size settings at the Application side. Before operation, be sure to have a good understanding of the contents.

2.1 Opening Printer Properties

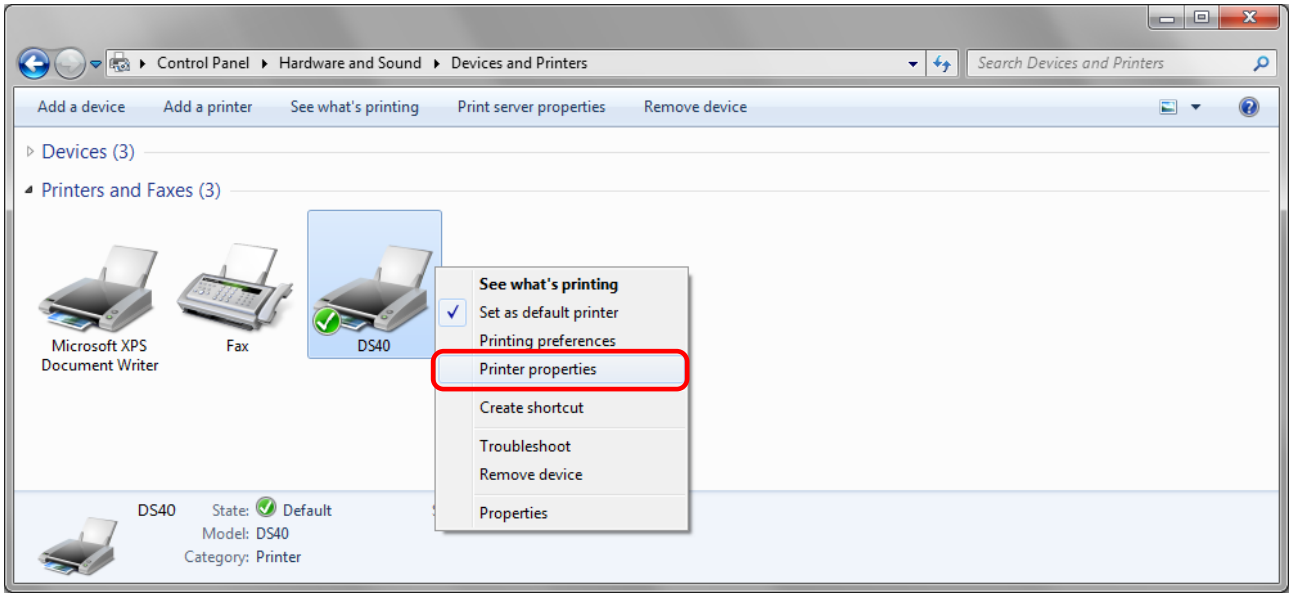
1. Click Start ⇒ Control Panel ⇒ open the control panel



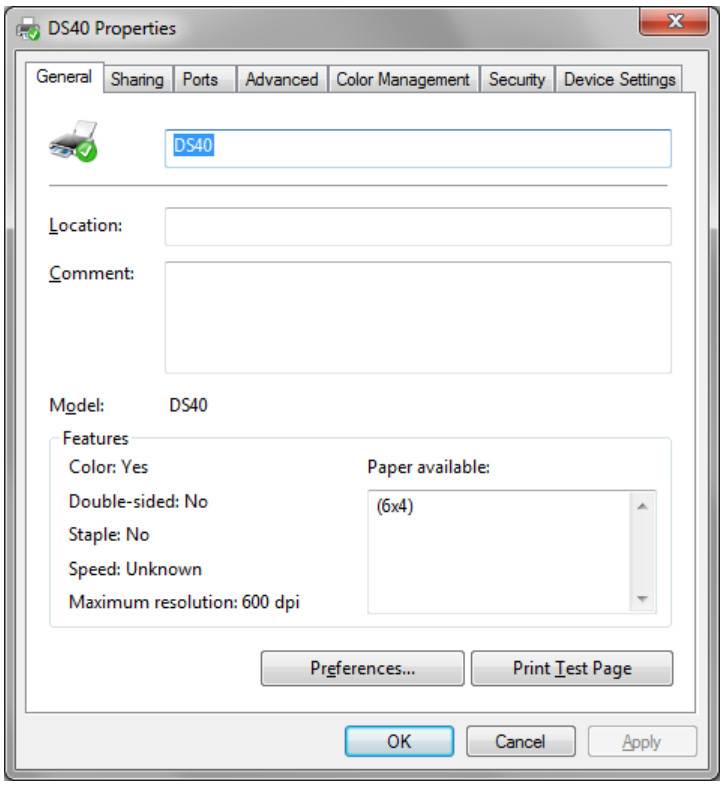
2. In the control panel, select View devices and printers ⇒ open the Devices and Printers window



3. Right-click on the DS40 icon, and from the pull-down menu select Printer properties ⇒ open the Properties window



4. The DS40 Properties window will appear.



2.2 Explanation of Print Setting Functions

From the Properties window, by selecting Preferences you can make various print settings.

2.2.1 Layout

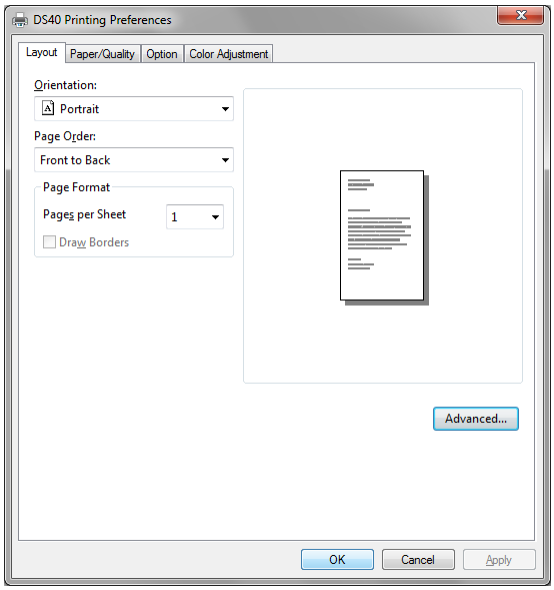
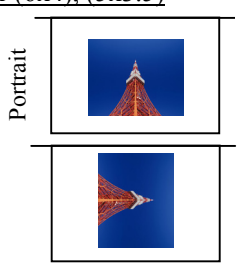


Fig 2.2.1 Layout tab

Output image depending on print direction

Ex.) For (6x4), (5x3.5)



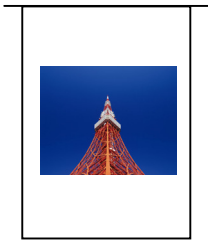
Print paper exit slot

Print paper exit slot

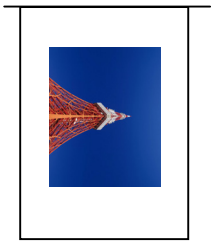
Landscape

For (5x7), (6x8),(6x9)

Portrait



Print paper exit slot



Print paper exit slot

Orientation

Assign print orientation as vertical or horizontal.

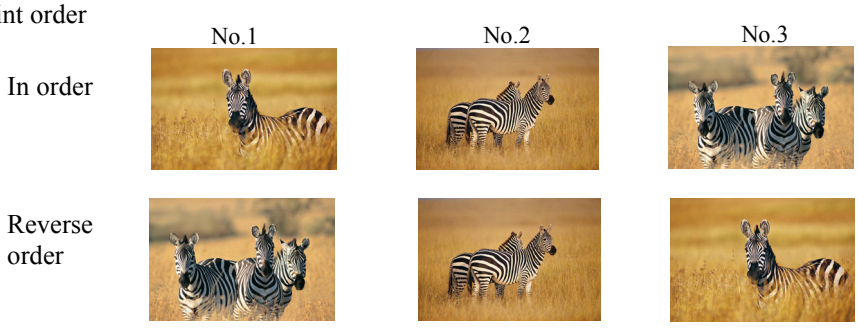
Output images of the original image without rotation are shown at the right.

Original image orientation

Page Order

When printing multiple images in the application, you can set the order.

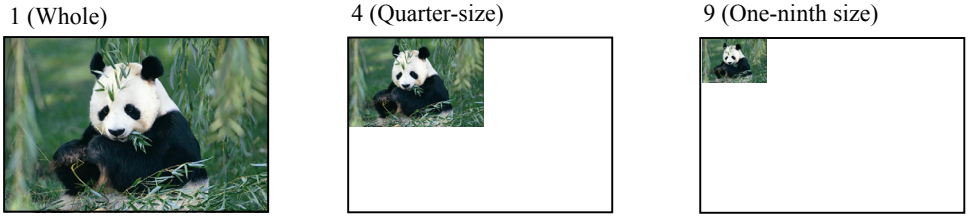
Ex.) Print order



Pages per Sheet

Prints the designated fractional size.

Ex.) Fractional size



2.2.2 Advanced Options

By selecting [Advanced] in the Layout window, various settings can be made using Advanced Options.

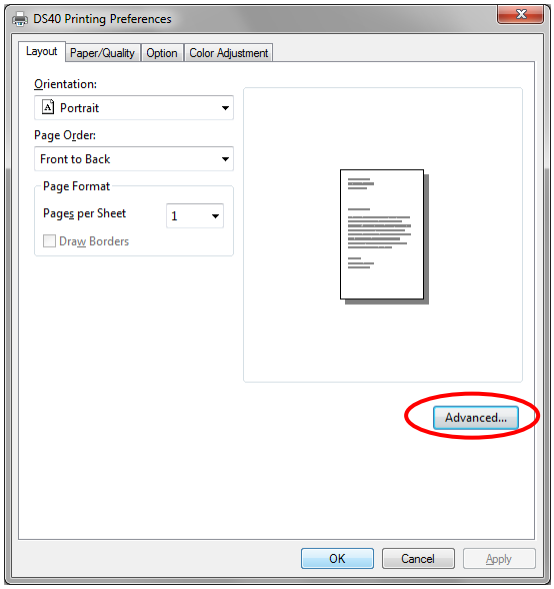


Fig 2.2.2.1 Advanced Settings

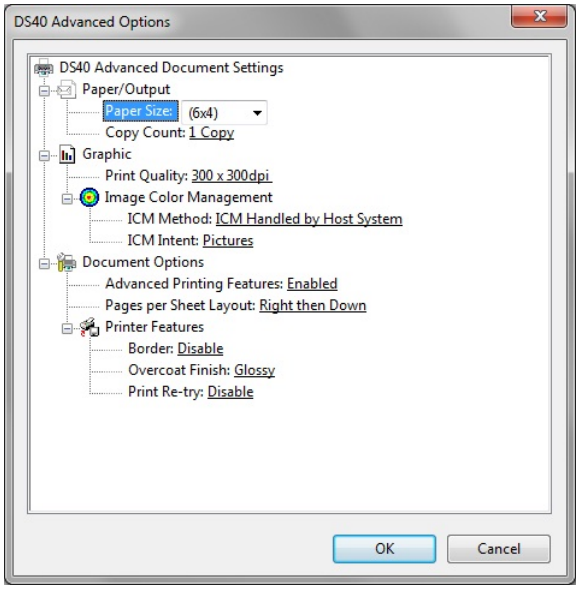


Fig 2.2.2.2 Advanced Options tab

Paper Size

You can designate the paper size. Please match the paper size to the media size with which the printer is equipped

Copy Count

You can designate the number of times an image will be printed.

Print Quality

You can designate the print quality. Please match the print quality to the printer settings.

ICM Method

ICM intent	Function
ICM Disabled	2.2.4 Synchronous with “Color Management: None” in paper option.
ICM Handled by Host System	2.2.4 Synchronous with “Color Management: ICM” in paper option. Performs color management with the driver.
ICM Handled by Printer	This is the same as setting “ICM Handled by Host System”.

ICM Intent

This designates the rendering method when using ICM. Always have the ICC profile for the DS40 set to “Picture”. Please do not use it at other settings.

Advanced Printing Features

Always have it set to “Enabled”. Please do not use it at other settings.

Pages per Sheet Layout

The layout direction of a picture is specified, when Pages per Sheet setting is multiple pages per sheet.

Border

Synchronous with the border option in the paper option.

Overcoat Finish (Depending on the version being used, "Glossy" may be the only option)
The overcoat finish for the printed surface can be selected from the following two types.

Overcoat Finish	Function
Glossy	This finishes the print with a glossy surface.
Matte	This finishes the print with a matte (non-glossy) surface.

* Change the printer of the version corresponding to Overcoat Finish and a non-corresponded version, and when you use it by connecting it to the same USB port, when you change printers, reboot the computer.

Print Re-try (Depending on the version being used, "Disable" may be the only option)
This sets up whether print data in a printer buffer when the error of a printer occurs is printed after error recovery, or it does not print.

Print Re-try	Function
Disable	Printing data in a printer buffer is cleared in the case of a printer error. After an error recovery, the cleared image data must be re-sent. When using an application that has an error recovery function, select this option.
Enable	Printing data in a printer buffer is held in the case of a printer error. After an error recovery, the print process resumes with the saved data. However, if the power is turned OFF, the data will not be saved.

* Change the printer of the version corresponding to Print Re-try and a non-corresponded version, and when you use it by connecting it to the same USB port, when you change printers, reboot the computer.

According to the contents of a printer error, the power supply of a printer needs to be re-switched on for error recovery. In this case, it is not dependent on a setup of Print Re-try, and printing data in a printer buffer is cleared. Operation by Print Re-try setup in each error is shown below.

<table>
<tr><th>Contents of an error</th><th>Print Re-try setup is "Disable"</th><th>Print Re-try setup is "Enable"</th></tr>
<tr><td>Paper End
Ribbon End
Cover Open
Paper Jam (*1)
Ribbon Error (*1)
Paper Definition Error
Scrap Box Error</td><td>Please resend picture data not printed after error recovery.</td><td>Printing processing is resumed from data currently held in a printer buffer after error recovery.
When paper initialization operation is performed, it is printed after paper initialization operation.</td></tr>
<tr><td>Data Error
Head Voltage Eror
Head Position Error
Power Supply Fan Stop
Cutter Error
Abnormal Head Temp.
Abnormal Media Temp.
Ribbon Tension Error
RFID Module Error
Abnormal motor Temp.
System Error</td><td>For error recovery, the power supply of a printer once needs to be turned OFF.
Therefore, print data in a printer buffer is cleared by power-supply OFF of a printer regardless of a setup of the Print Re-try function.

Please resend picture data not printed after printer re-starting.</td><td>For error recovery, the power supply of a printer once needs to be turned OFF.
Therefore, print data in a printer buffer is cleared by printer power-supply OFF even if the Print Re-try function is set to "Enable".

Please resend picture data not printed after printer re-starting.</td></tr>
</table>

*1: After an error stop, a paper or a ribbon should perform removal work of an error factor according to a printer user's manual.

<Multiple layout>

When the DS40 is using 6x9(A5W), 6x8 or DS80 is using 8x12, 8x10 size media, 2 or 3 image layout is possible.
With the printer driver paper setting, multi-image layout is made possible, and the image sizes are as follows.

Layout designation

	Driver paper setting (layout)	Image size (mm)	Using media
DS40	(6x4) x 2	(156.1x105.0) x 2	6x9(A5W), 6x8
DS80	(8x4) x 2	(207.3x104.6) x 2	8x12, 8x10
	(8x5) x 2	(207.3x130.0) x 2	8x12, 8x10
	(8x6) x 2	(207.3x155.4) x 2	8x12
	(8x5) _ (8x4)	(207.3x130.0) x (207.3x104.6)	8x12, 8x10
	(8x6) _ (8x4)	(207.3x155.4) x (207.3x104.6)	8x12, 8x10
	(8x6) _ (8x5)	(207.3x155.4) x (207.3x130.0)	8x12
	(8x8) _ (8x4)	(207.3x206.2) x (207.3x104.6)	8x12
	(8x4) x 3	(207.3x104.6) x 3	8x12

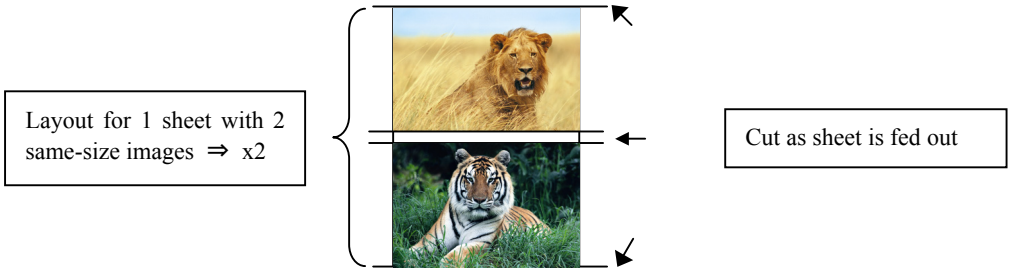
Multiple layout is possible under the following conditions.

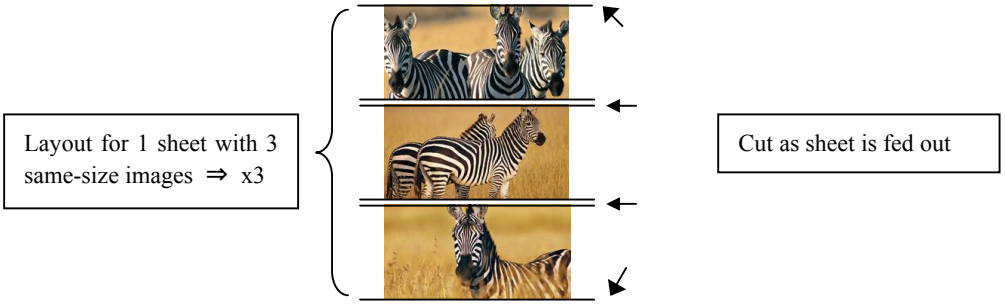
1.The printer is using 6x9, 6x8 or 8x12, 8x10 size media.
2.The printer driver paper size is set to one of the above sizes.
3.Multiple images are sent from the application.

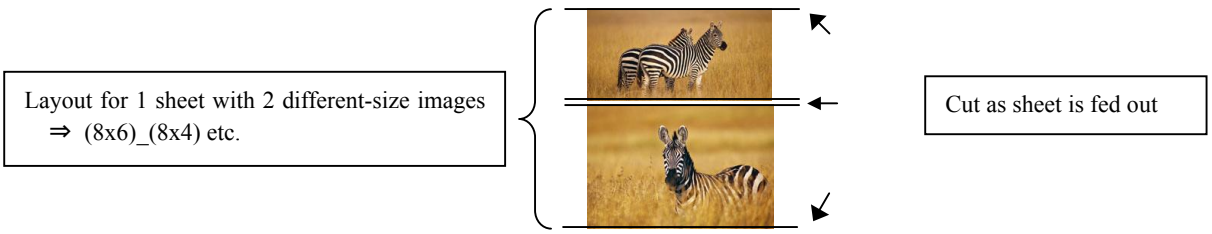
Note) Because the multi-image layout occurs on a per job basis, this works when there are multiple images for 1 job.If you want to print the same image, be sure to send the image data for each copy to be printed.The printer prints 2 or 3 images in one operation, and the paper is cut as it is fed out.

<Multi-image layout patterns>

The following combinations are possible for the multi-image layout patterns.





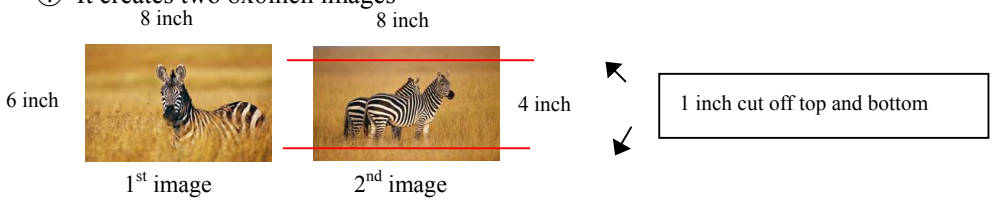


Cautions for printing 2 different-size images on one sheet

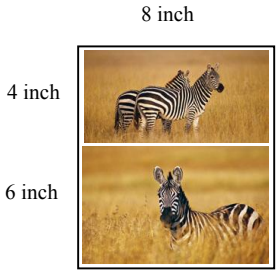
When printing 2 different-size images on 1 sheet, 1 inch will be cut off the top and bottom of the 2nd image when the image is being generated. When creating the original image, be aware of the following points.

Ex.) When the layout is set for (8x6)_(8x4)
The driver creates the layout image in the order of ①, ②.

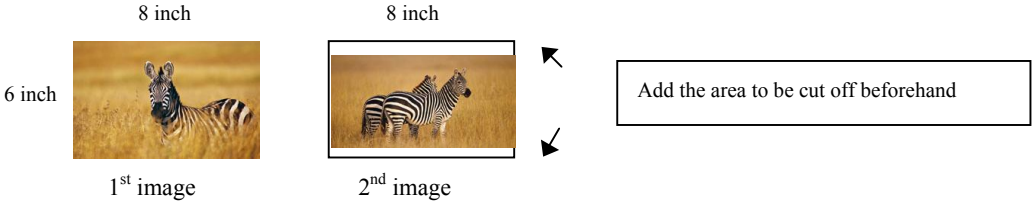
① It creates two 8x6inch images



② The driver then lays out the 2 different-size images from ① as one (8x10) image and outputs it to the printer.



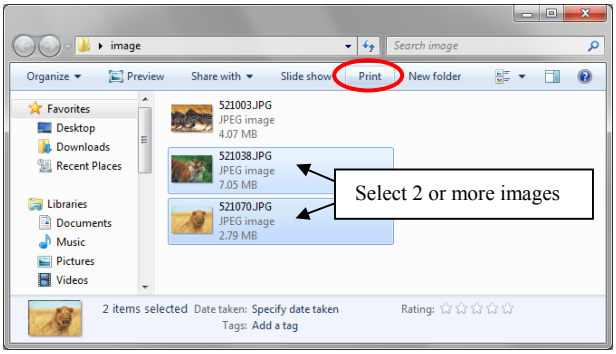
Ex.) Example of creating the original image.
When outputting the original image to the driver, the 1st and 2nd images are created as the same size, so factor in the space that will be cut off from the 2nd image.



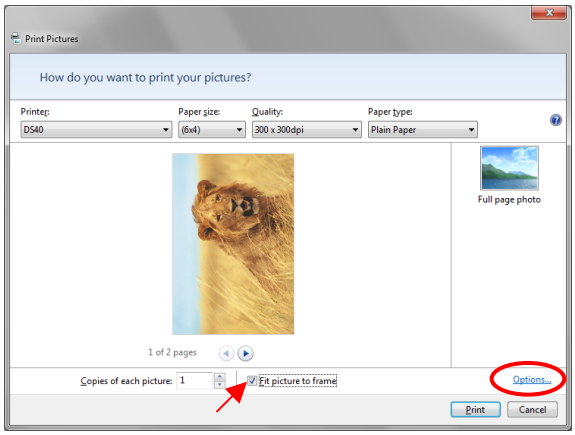
<Example of Application Use>

This is an example using Windows Explorer

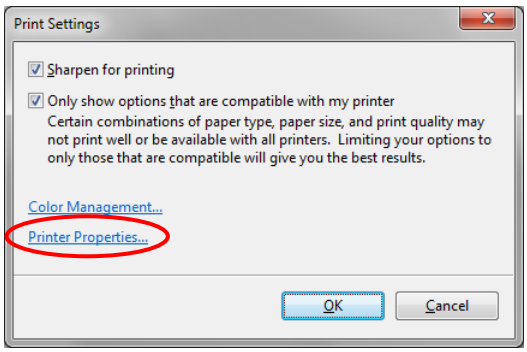
Step 1. Select 2 or more images⇒Click “Print”.



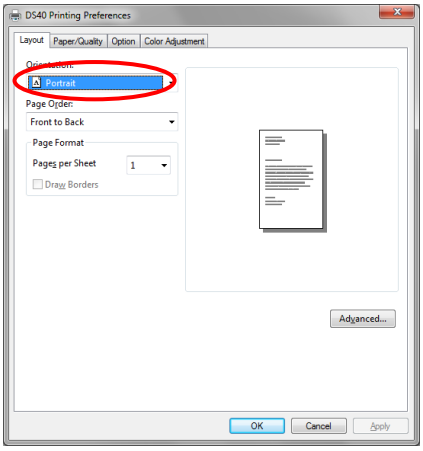
Step 2. Check “Fit picture to frame” and click “Options”.



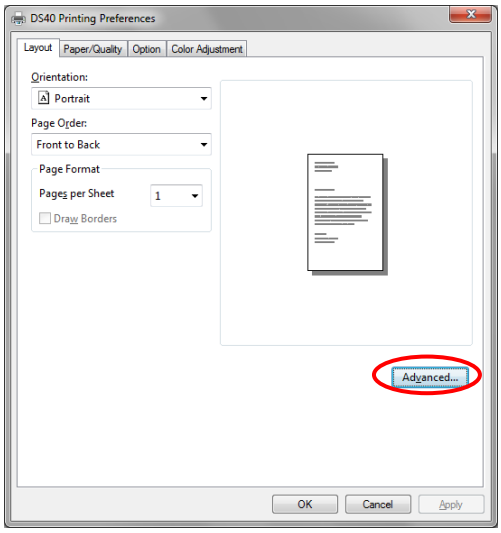
Step 3. Click on “Printer Properties”.



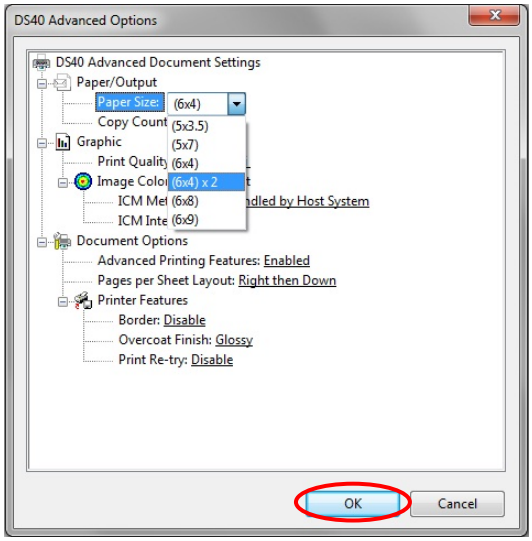
Step 4. From the “Orientation” pull-down menu, select “Portrait”.



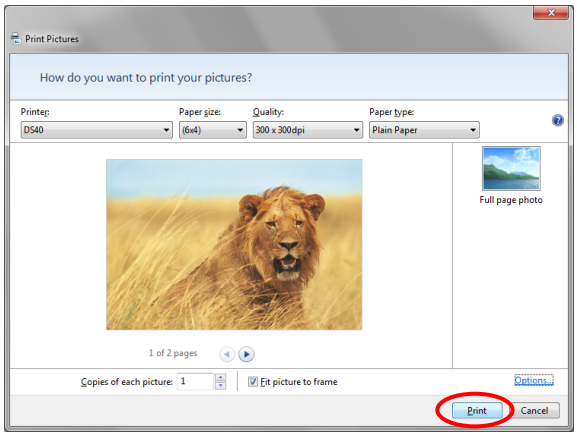
Step 5. Click on “Advanced”.



Step 6. Set the Paper Size to “(6x4)x2”. Then click “OK” on the windows from steps 6⇒5, returning to the window displayed in Step 2.



Step 7. Click on “Print”.



2.2.3 Paper/Quality

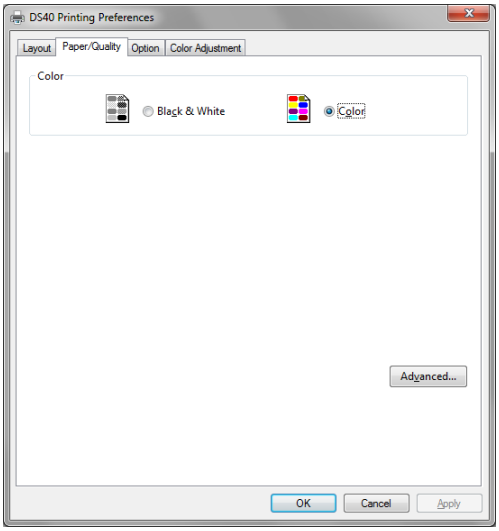


Fig 2.2.3 Paper/Quality tab

Color Please set to color print. Do not use for black and white printing.

2.2.4 Option

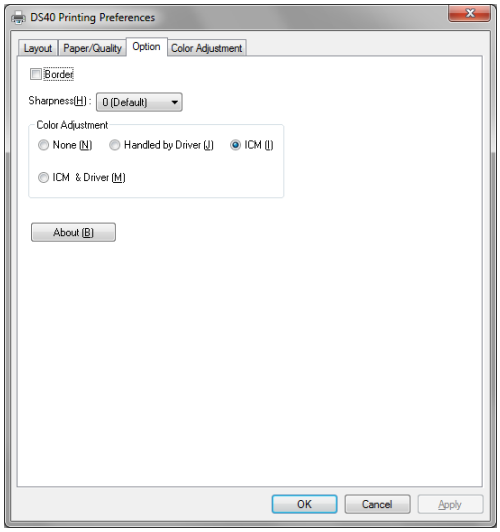


Fig 2.2.4.1 Paper option tab

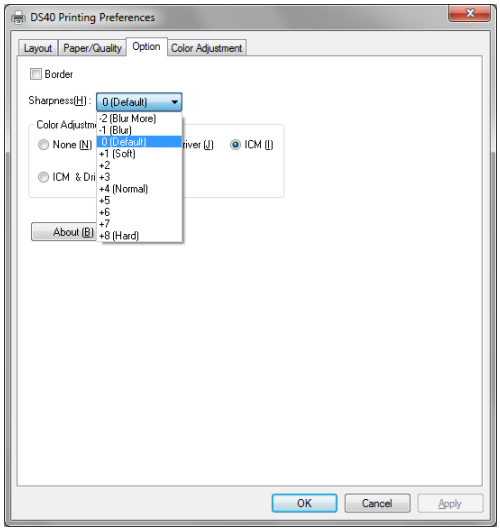


Fig 2.2.4.2 Sharpness setting

Border

Designates yes or no for border (check means with border). Synchronous with border in the Advanced Settings.

Sharpness

Processes for 11 sharpness levels (Fig 2.2.4.2). 0(Initial setting) means there is no sharpness processing. Minus(-) blurs the image, and plus(+) increases the sharpness.

Color Adjustment

None

Synchronous with the ICM Method in the Advanced Settings. Checking this item disables ICM and the Color Adjustment tab, and color management does not occur from the driver.

Handled by Driver

Checking this item disables ICM and 2.2.5 Color Adjustment is enabled. The adjustment values for gamma, brightness, contrast, and chroma are shown.

ICM

Synchronous with the ICM Method in the Advanced Settings (ICM Handled by Host System). Checking this item enables color management from the driver.

ICM & Driver

If you check this, ICM (color management) and color adjustment will be enabled.

About

Displays the driver version.

2.2.5 Color Adjustment

If you check Handled by Driver in 2.2.4 Option, the respective color adjustment values in the Color Adjustment tab are reflected in the image.

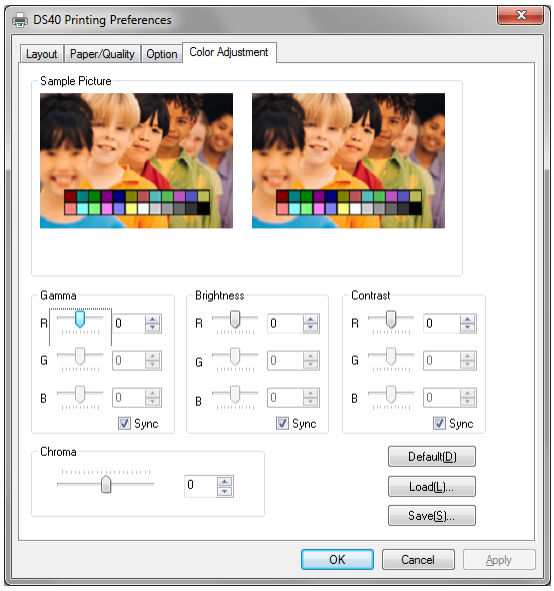


Fig 2.2.5 Color Adjustment tab

Setting ranges in the Color Adjustment tab are as follows:

Adjustment Item	Adjustment Value
Gamma	-100(dark) ~ 100(light) (0 means no adjustment, Gamma 2.0 ~ 0.5) Adjusts the density of the highlights in the image. The greater the gamma value, the brighter the highlights. Synchronous check box ON **:** Sets RGB at the same value OFF**:**Sets RGB at a different value
Brightness	-100(dark) ~ 100(light) (0 means no adjustment) Adjusts the brightness of the image. The larger the value, the greater the overall brightness of the image. Synchronous check box ON **:**Sets RGB at the same value OFF**:**Sets RGB at a different value
Contrast	-100(weak) ~ 100(strong) (0 means no adjustment) Adjusts the contrast of the image. The larger the value, the greater the contrast. Synchronous check box ON **:** Sets RGB at the same value OFF**:** Sets RGB at a different value
Chroma	-100(weak) ~ 100(strong) (0 means no adjustment) Adjusts the color saturation of the image.

2.3 Default Values for Various Settings

Default values for each option (at the time of installation) are shown below. If the printer driver does not work correctly after changing the options, please return the options to the default settings.
Note) According to the Service Pack and use environment of OS, the default value at the time of installation may differ from the following chart.

Tab	Options			Default
Layout	Orientation			Portrait
	Page Order			Front to Back
	Pages Per Sheet			1
Paper/Quality	Color			Color
Option	Border			Disable
	Sharpness			0 (Default)
	Color Adjustment			ICM
Color Adjustment	Gamma			0
	Brightness			0
	Contrast			0
	Chroma			0
Advanced (Click [Advanced] button of Layout tab)	Paper/Output	Paper Size		DS40 (6 x 4) DS80 (8x10)
		Copy Count		1
	Graphic	Print Quality		300 x 300dpi
		Image Color Management	ICM Method	ICM Handled by Host System
			ICM Intent	Pictures
	Document Option	Advanced Printing Features		Enable
		Pages per Sheet Layout		Right then Down
		Printer Features	Border	Disable
			Overcoat Finsh	Glossy
			Print Re-try	Disable

Chart 2.3 Print Setting Default Values

2.4 Color Management

In [Color Management], this designates the color profile. Default at installation associates [DS40_xxxx].
xxxx is a 4-digit number that refers to the version.

Step 1. Select “Color Management” tab in “Printer Properties”, and click on “Color Management” button.

Step 2. Choose printer: DS40 from a device.

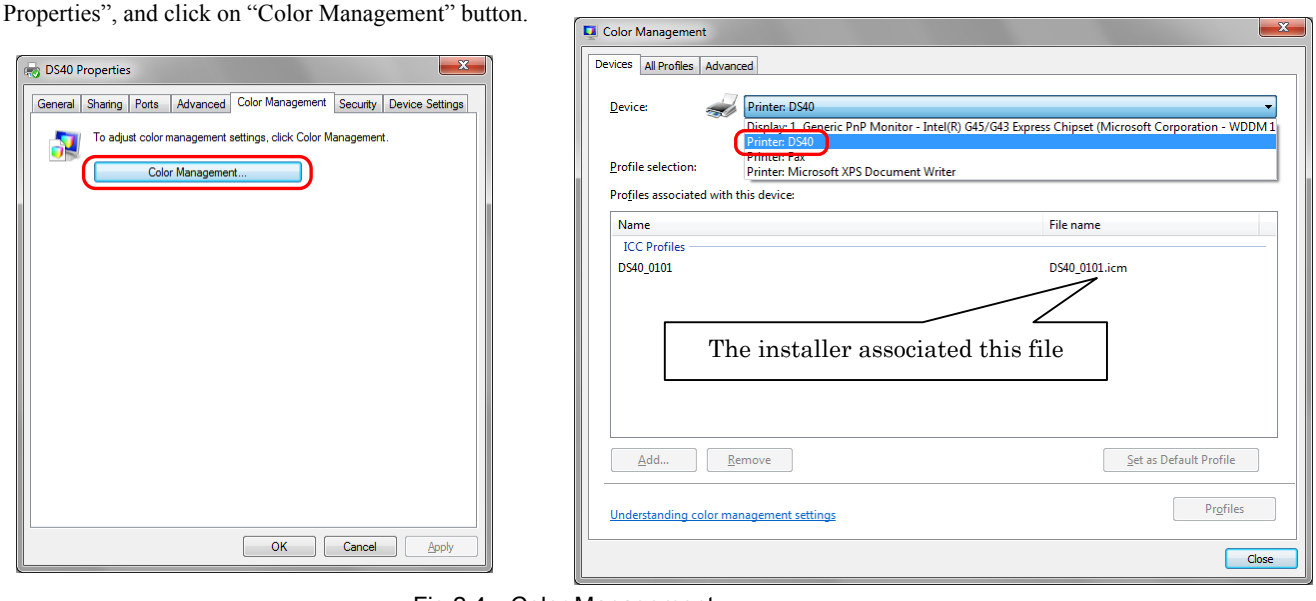


Fig 2.4 Color Management

2.5 Print Area

Depending on the paper size designated at the driver, the image size and dot count will be as follows.

Model	Paper	Size (inch)	Print Area (mm)	300 x 300 DPI Dot amount	300 x 600 DPI Dot amount
DS40 / DS80 (*)	(5x3.5)	3.5" x 5"	92.1 x 131.1	1088 x 1548	2176 x 1548
	(6x4)	4" x 6"	105.0 x 156.1	1240 x 1844	2480 x 1844
	(5x7)	5" x 7"	131.1 x 181.0	1548 x 2138	1548 x 4276
	(6x8)	6" x 8"	156.1 x 206.2	1844 x 2436	1844 x 4872
	(6x9)	6" x 9"	156.1 x 232.0	1844 x 2740	1844 x 5480
DS80	(8x4)	8" x 4"	207.3 x 104.6	2448 x 1236	2448 x 2472
	(8x5)	8" x 5"	207.3 x 130.0	2448 x 1536	2448 x 3072
	(8x6)	8" x 6"	207.3 x 155.4	2448 x 1836	2448 x 3672
	(8x8)	8" x 8"	207.3 x 206.0	2448 x 2436	2448 x 4872
	(8x10)	8" x 10"	207.3 x 257.0	2448 x 3036	2448 x 6072
	A4 Length	8" x 11.7"	207.3 x 297.0	2448 x 3544	2448 x 7088
	(8x12)	8" x 12"	207.3 x 307.8	2448 x 3636	2448 x 7272

With the DS80 printer, the paper size (output size) can be designated as less than 8 inches, but the media used will be the DS80 8 inch width media.

Chapter 3 Updating the Driver

Removing the driver is the same for both the “DS40” and the “DS80”. The following instructions are for the “DS40”, but if you are using the “DS80”, just read it as “DS80”.
In order to update the printer driver, follow the steps shown below.

1. Driver Removal

(1) Before removing the printer-driver, shut down all other applications. Also, in the “Devices and Printers” window, select the printer icon of the printer you want to remove, check the bottom of the window that there are no documents in queue, and start removal of the driver.

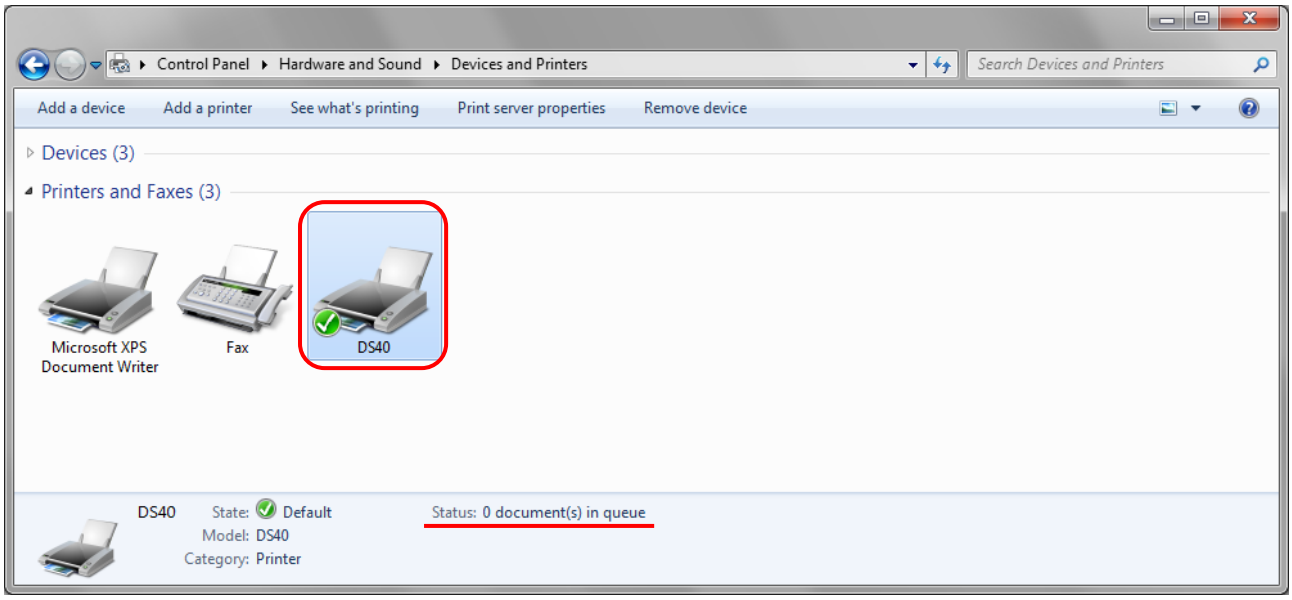


Fig 3.1 “Devices and Printers” window with the DS40 icon clicked

(2) Select “Start”–“Control Panel”, and click on “View devices and printers” in the control panel. From the “Devices and Printers” window, select the DS40 printer, display the pull-down menu with the right click, and click on “Remove device”.

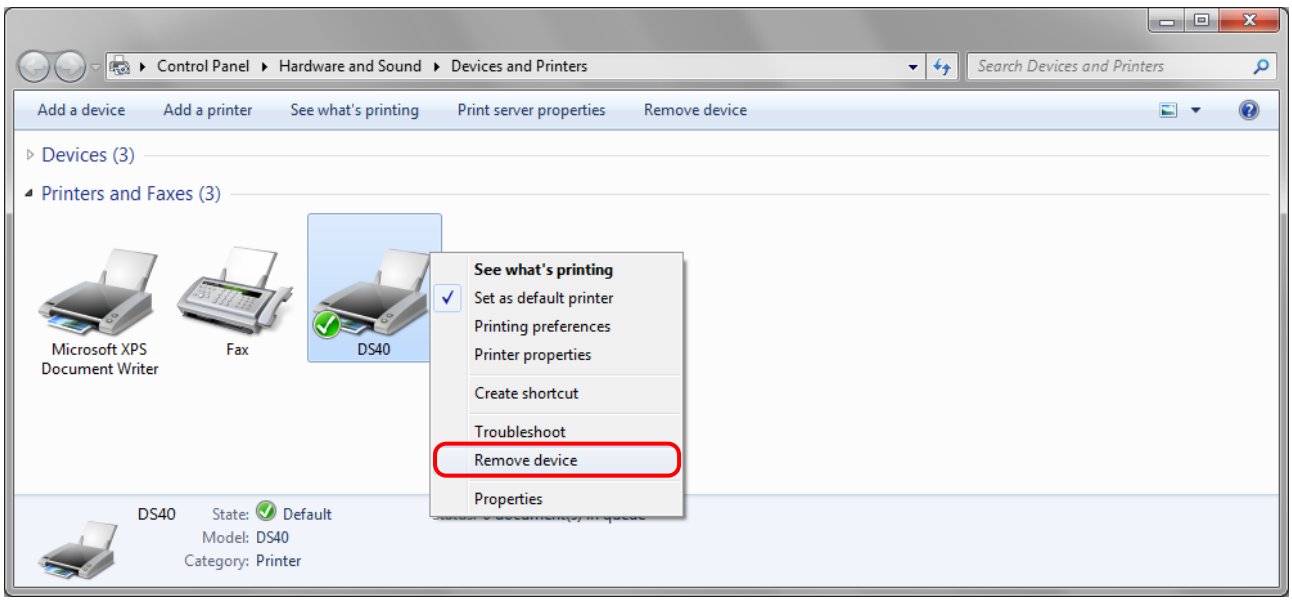


Fig 3.2 Devices and Printers window; DS40 right-clicked menu

(3) When “Are you sure you want to remove this device?” appears, click on “Yes”.

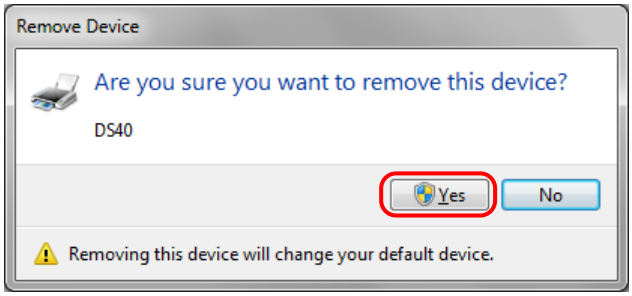


Fig 3.3 Remove device confirmation window

(4) After the DS40 printer has been removed, select another printer (for example: Fax), and click on “Print server properties” in the menu bar.

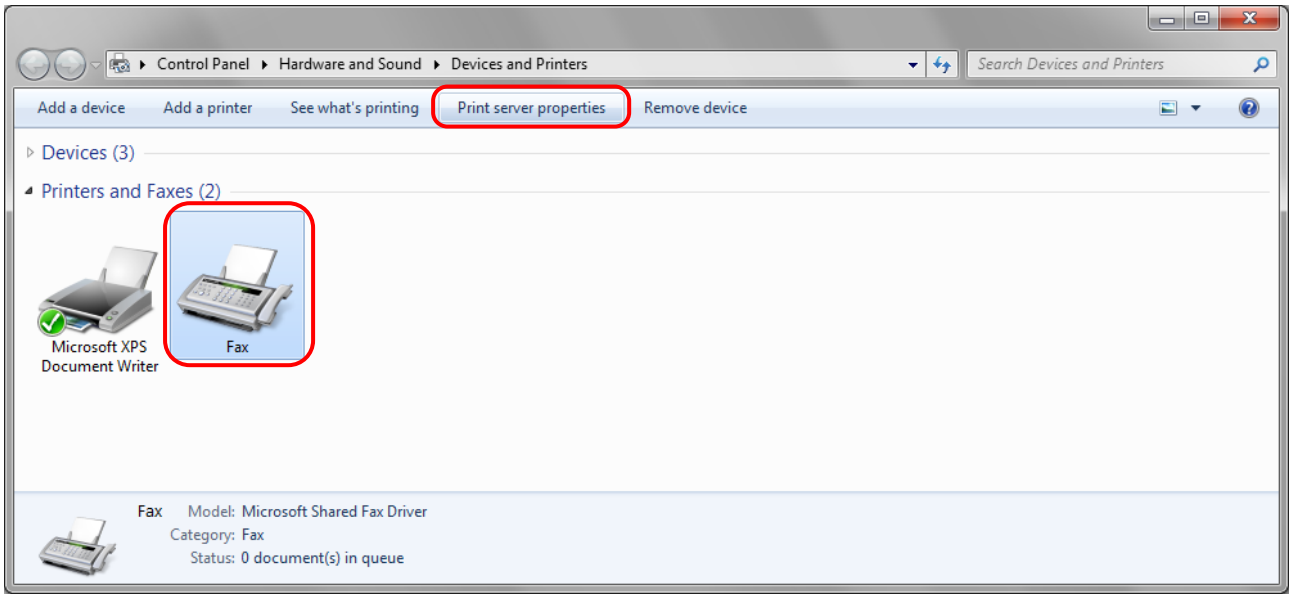


Fig 3.4 “Devices and Printers” window, showing the “Print server properties” menu

(5) When the Print Server Properties window appears, click on the Drivers tab. From the list of installed printer drivers, select "DS40", and click the "Remove" button.

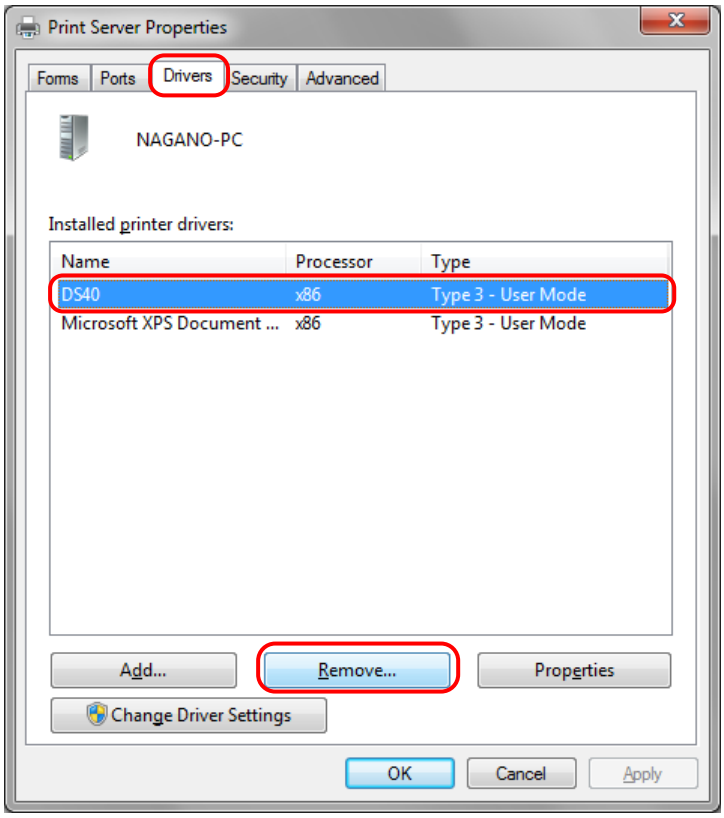


Fig 3.5 Print Server Properties window

(6) When the Remove Driver and Package window appears, select "Remove driver only", and click on the"OK" button. Removal of the driver package takes place in the next section "2. Uninstalling a Driver Package".

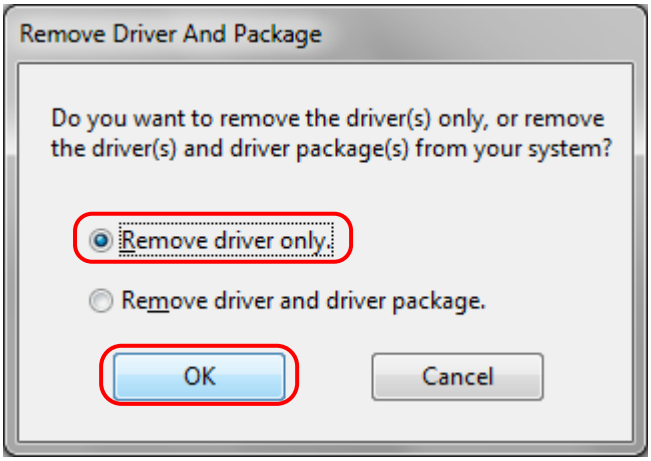


Fig 3.6 Remove Driver and Package window

(7) When the Print Server Properties confirmation window appears, click on the “Yes” button.

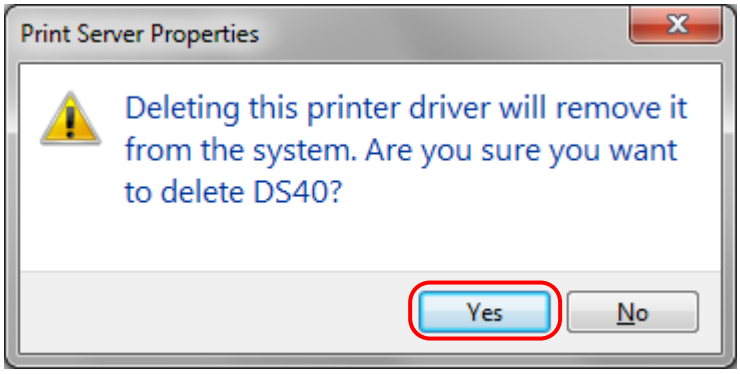


Fig 3.7 Print Server Properties confirmation window

(8) Using the Print Server Properties window, confirm that “DS40” has been removed, and click on the “Close” button.
After removing the printer driver, uninstall the driver package.

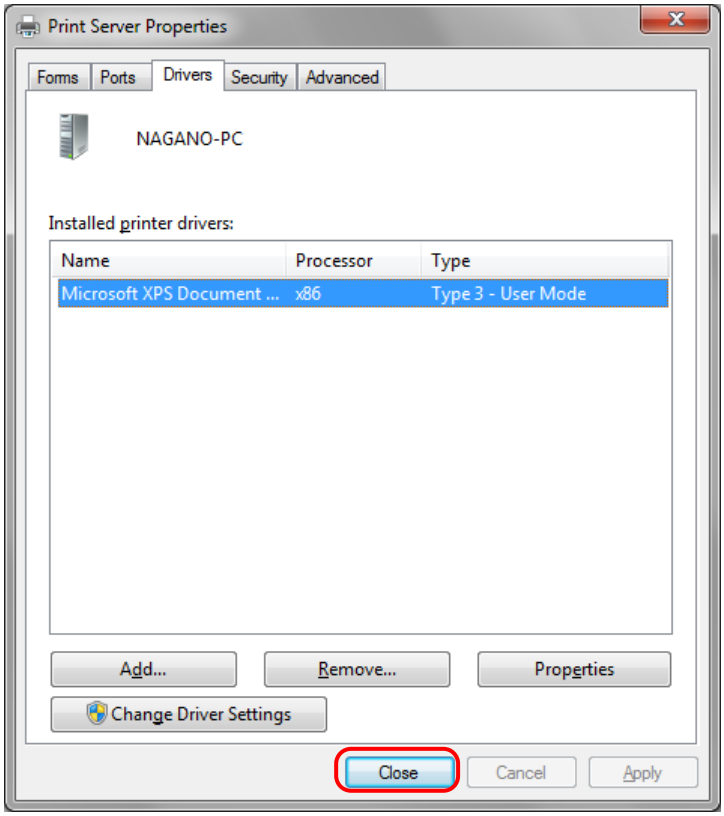


Fig 3.8 Print Server Properties window

2. Uninstalling a Driver Package

(1) Select “Start”, then “Control Panel”, and open the control panel. Click on “Uninstall a program” in the control panel.

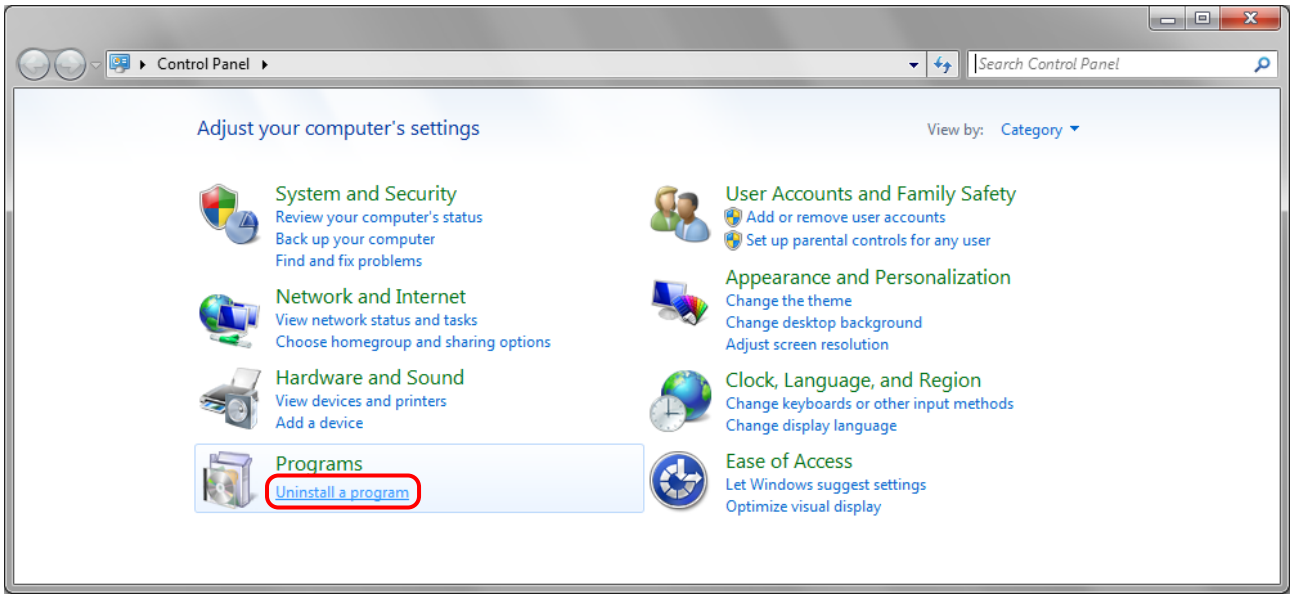


Fig 3.9 Control Panel

(2) When the “Uninstall or change a program” window appears, double-click on “Windows Driver Package – Dai Nippon Printing DS40 (mm/dd/yyyy x.x.x.x)” (mm/dd/yyyy = the date, x.x.x.x = the version).

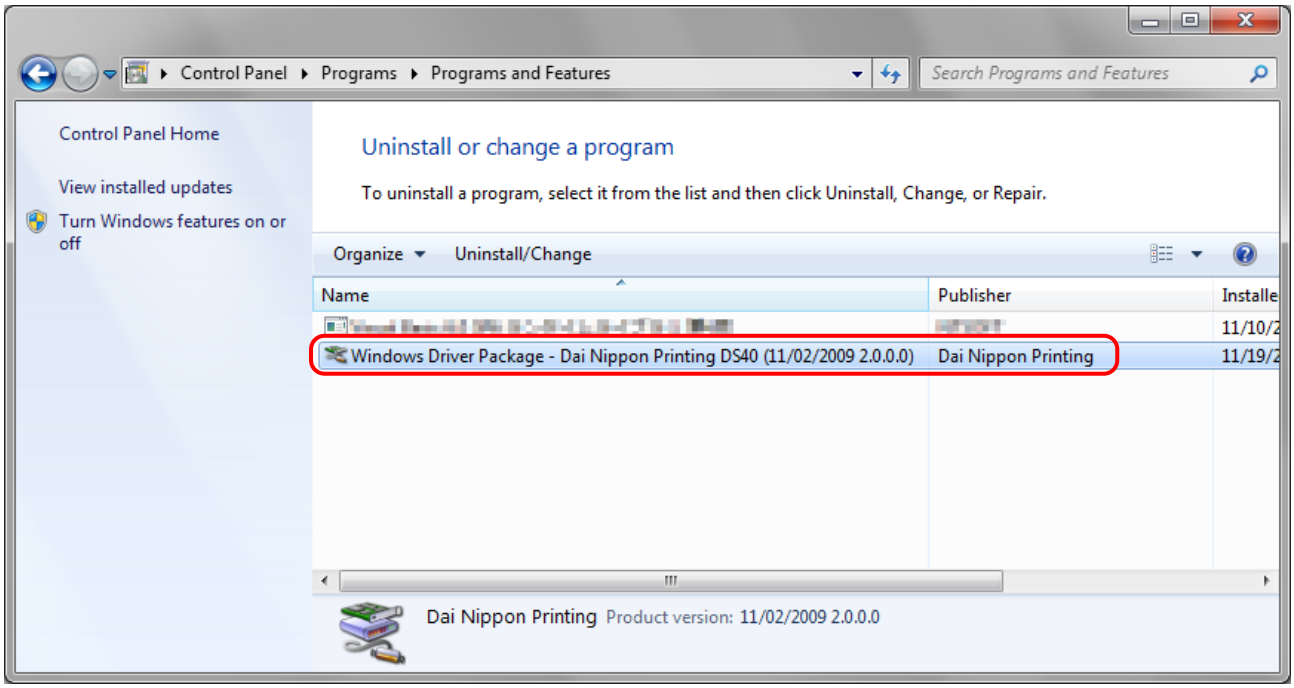


Fig 3.10 Uninstall a program

(3) When the “Uninstall Driver Package” window appears, click on “Yes”.
The Uninstall will be completed.
After finished with uninstalling the driver package, reboot the computer.

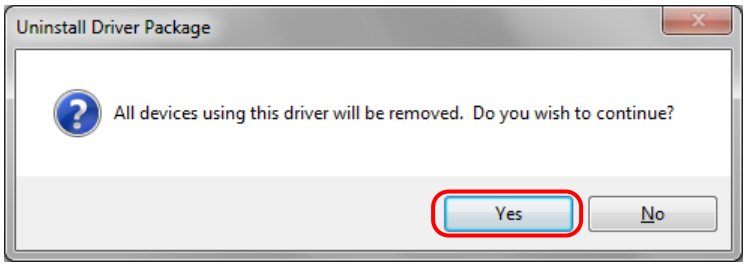


Fig 3.11 Uninstall confirmation window

3. Installing the printer-driver upgrade

After removing the printer and printer-driver, install the new printer-driver. For installation steps, please refer to Chapter 1 “Install”.

4. Rebooting the computer

After installation of the printer-driver is complete, be sure to reboot the computer.
(Do not print immediately after installation. First reboot the computer.)

Chapter 4 Driver Removal

For steps to remove the printer driver, refer to Chapter 3 “1. Driver Removal” and “2. Uninstalling a Driver Package”.